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Combating Pollution

Offshore Drilling & Regional Sea Regimes | Jessica Kyle

In March 2013, British Petroleum, in collaboration with other oil companies, announced the drilling of twelve new oils wells in the North Sea. Only two weeks later, Lundin Petroleum announced the discovery of new oil fields along the Norwegian Continental Shelf, also in the North Sea. The exploitation of offshore resources is clearly a growing subset of the petroleum industry. This pattern is especially true in countries not endowed with vast land-based fossil fuels. Access to oil and natural gas resources reinforce a state's regional and global relevance as energy fuel is a commodity which enjoys consistent demand. For example, the demand for natural gas has increased steadily over the last thirty years. To meet this higher demand, global production of natural gas has more than doubled in the same time span.

However, despite the strong economic incentives, the current frantic pursuit of offshore petroleum resources has intense environmental ramifications. Offshore drilling creates harmful byproducts that are discharged into surrounding waters during the drilling process. Additionally, drilling equipment is prone to failure and deterioration, which can lead to dangerous accidents and catastrophic oil spills or gas leaks. Furthermore, as demand for petroleum products continues to increase, oil and gas companies have begun drilling deeper and deeper wells to access previously untapped deposits. The exploitation of deeper fields is generally more challenging to execute, resulting in a greater probability of pollution occurring. Pollution resulting from these aspects of offshore drilling is not only an issue of moral concern, but also has a tangibly negative impact on neighboring states. Regulation of some kind is necessary in order to promote environmentally safer and more sustainable drilling practices and curb the pollution caused by offshore drilling.

In order to assess the role of regulation in the prevention of pollution from offshore drilling, this article comparatively assesses the policies espoused and enforced by regional sea institutions, specifically in the instances of offshore drilling in the Mediterranean Sea and North Sea. The regional regimes in each of these seas are markedly different. The Mediterranean Sea regime is robust with strong mechanisms of enforcement and high degrees of compliance. Despite the strength of the regime, the regional institutions in the Mediterranean Sea offer less guidance on pollution from offshore drilling as the widespread extraction of offshore resources is a relatively new regional phenomenon. The North Sea regime, on the other hand, lacks many of the institutionalized mechanisms of the Mediterranean Sea. However, regional states have a much more well-established offshore drilling industry, one that has more thoroughly permeated the regional economy. As such, regional states in the North Sea have actively pursued domestic policies to curb the water pollution from offshore drilling. The presence of strong domestic policy has lessened the need for a regional sea regime similar to the Mediterranean Sea regime in strength and breadth.

Through the analysis of the Mediterranean Sea and North Sea regional regimes, this article will argue that the reduction of pollution from offshore drilling is not dependent on the presence of strong regional sea institutions. Additional factors, such as strong domestic environmental policies, can contribute to pollution reduction in regional seas, .

Regional Sea Pollution: The Mediterranean Sea

Unlike other offshore drilling operations, the exploration of oil and gas reserves in the Mediterranean Sea is a relatively new endeavor. In fact, it wasn't until Israel discovered natural gas in its coastal waters in late 2010 that other Mediterranean states began more actively seeking offshore petroleum sources. Shortly after Israel's discovery, other eastern Mediterranean states also found and began exploiting offshore petroleum resources. States currently operating offshore drilling rigs in the eastern Mediterranean include Greece, Turkey, Cyprus, and potentially Syria. Italy and Spain also operate a few hundred oil drilling operations in the western region of the sea. As a relatively new industry, the Mediterranean region is still adapting politically and economically to the discovery of offshore petroleum reserves.

Despite its youth as an industry, offshore drilling in the Mediterranean Sea still raises key environmental concerns. Scientific literature on the environmental conditions of the Mediterranean particularly point to the significance of oil pollution on marine wildlife and the high risk of spills and leaks. The long history of serious accidents on drilling platforms in the

Mediterranean have also contributed to the intense regional concern over of the effects of oil pollution. Finally, there is a unique concern in the Mediterranean region regarding offshore drilling pollution due to earthquakes. This is of particular concern to the European Union as earthquakes occur more frequently in the Mediterranean than in the more northern waters where other European states have offshore drilling sites. An earthquake that disturbs the drilling mechanism of a platform could cause immeasurable environmental damage through the contamination of the surrounding waters with raw materials or drilling byproducts.

Regional Sea Pollution: The North Sea

The North Sea contains Europe's largest reserves of oil and natural gas, producing approximately five percent of the world's oil in 2009. Norway and the United Kingdom hold the largest shares of offshore resources in the North Sea, while Denmark, Germany, and the Netherlands have smaller claims in the region.

Unfortunately, offshore production in the North Sea is plagued by high production costs and a "maturing" repository; that is, there is a small likelihood of discovering new oil deposits. In fact, levels of oil and gas production in the North Sea have already peaked and are estimated to have declined by nearly two-thirds over the last twelve years. However, despite the apparent decline in supply, there is a growing demand in the European market for fossil fuels from the North Sea due to the close proximity and subsequently low transportation costs. In light of this demand, some oil companies in the region are predicting a surge in production in the next few years.

The major environmental concern regarding offshore drilling in the North Sea is the high potential for oil spills and gas leaks. The sea is a key economic resource of the surrounding countries, especially for shipping and fisheries. Pollution from offshore drilling, therefore, is not just a moralistic environmental concern, but an economic one as well. Recent news media in the region have focused heavily on the potential threats of spills or leaks. Despite an initial assessment in 1987 that offshore drilling causes no real harm to marine wildlife, the risks to wildlife are now a key concern, especially in the Shetland Islands, Faroe Islands, and along the Norwegian coastline. In addition, recent gas leaks from platforms in the Scottish North Sea has only increased fears of their likelihood.

As illustrated by offshore drilling in the Mediterranean and North Seas, water pollution from offshore drilling is a very real threat that has lasting implications. These instances of pollution point to the need for environmental regulation of offshore drilling either through regional institutions and treaties or strong domestic policies. The following section will further explore the current framework of regional sea regimes, highlighting the specific characteristics of the regimes in the Mediterranean and North Seas.

Regional Sea Regimes

The most prevalent international institution for the governance of regional seas is the United Nations' Environment Program's Regional Seas Program. The Regional Seas Program seeks to address the increasing degradation of oceans and seas around the world through the creation of sustainable management protocols. Through the Regional Seas Program, the United Nations Environmental Program (UNEP) coordinates and monitors regional state action. UNEP administers 13 Regional Seas programs, coordinates seven non-UNEP programs, and monitors five independent programs. For example, the regional institutions on the Mediterranean Sea are administered by the UNEP and are a part of the formal Regional Seas Program. On the other hand, the North Sea does not have such a formal system of regional institutions. Rather, the North Sea is partly governed by some of the North-East Atlantic instruments. These North-East Atlantic entities are classified as an "independent program" by the UNEP.

In addition to the formalized regional organizations, regional sea governance also includes multilateral agreements between regional states and domestic environmental policies. In order to better understand the specificities of regional sea governance in regards to offshore drilling, this article now turns to an analysis of the governance schemes of the Mediterranean Sea and North Sea.

Regional Sea Regimes: The Mediterranean Sea

The primary actor in the Mediterranean Sea regime, as indicated previously, is the UNEP through its Regional Sea Program. The UNEP provides a framework structure for negotiations between states on environmental policies for the Mediterranean Sea. Currently, twenty-two actors participate in the UNEP's Mediterranean Sea program. Established in 1975, the Mediterranean Sea program enacted the Mediterranean Action Plan which focused on creating a unitary environmental policy in the region through four main avenues: adoption of regional treaties, coordination of research and monitoring, integration of planning, and administrative and budgetary support. The most important initiative of the Mediterranean Action Plan was the creation of the Land-Based Sources Protocol in 1980, which established limitations on emissions into the Mediterranean Sea from neighboring states.

In addition to this overarching framework of the Mediterranean Sea program, the regime also consists of more specialized protocols and conventions to address specific instances of pollution and environmental degradation. Yet, in the instance of pollution from offshore drilling, there is surprisingly little regional policy, likely because the industry did not develop in the region until recently. However, in a stroke of foresight, the Madrid Offshore Protocol was adopted in October of 1994, entering force in 2011. The Madrid Offshore Protocol implemented two important mechanisms for the limiting of pollution from offshore drilling in the Mediterranean Sea. First, to encourage compliance, it declared that sanctions would be placed upon any member state that breached the obligations set out in the Protocol. Second, the Protocol also mapped out quality monitoring mechanisms in order to accurately document the effectiveness of the offshore drilling pollution policy over time. The inclusion of a quality monitoring mechanism is a testament to the overall strength and robustness of the Mediterranean Sea regime.

The creation of a specific protocol to deal with pollution from offshore drilling is very much a function of the highly institutionalized nature of the Mediterranean Sea regime. However, the mechanisms by which states seek pollution abatement are quite different when a strong, overarching institution does not exist, as is the case in the North Sea regime.

Regional Sea Regimes: The North Sea

Unlike the Mediterranean Sea regime, the North Sea region does not have a large umbrella institution to oversee regional environmental policy or to act as a forum of discussion between regional states. Instead, the North Sea is included in the jurisdiction of several smaller institutions, several of which are monitored by the UNEP as "independent programs." A few of these institutions are the OSPAR Commission, the Committee of North Sea Senior Officials, the North Sea Network, and the North Sea Conferences. These institutions act independently of one another, often overseeing a large jurisdiction than just the North Sea. For example, the OSPAR Commission seeks to address environmental concerns in the entirety of the Northeast Atlantic, and they include the North Sea in their definition of this jurisdiction. As a side note, it is curious to note that the UNEP does not include the North Sea in its definition of the Northeast Atlantic. Perhaps this variance in definitions is in fact impeding the creation of an overarching regional institution for this region.

As in the Mediterranean Sea, state actors and non-institutionalized multilateral agreements are also important parts of the North Sea environmental regime. Due to the lack of a robust, key regional institution, state actors have a more dominant role in the monitoring and assessment of policy and policy goals. There are nine states that actively collaborate to create environmental legislation for the North Sea: Belgium, Denmark, France, Germany, The Netherlands, Norway, Sweden, Switzerland and the United Kingdom.

Despite the lack of a large institutionalized organization, the states in the North Sea have passed several agreements regarding the abatement of pollution from offshore drilling installations. For example, the OSPAR Commission has implemented several measures to reduce pollution from the oil and gas industry, monitoring their success through scientific procedures and monitoring systems. Like the Mediterranean Sea program, OSPAR creates quality status reports of the environmental conditions of the North Sea, allowing for more accurate creation of policy by regional state actors to address environmental concerns, such as offshore drilling.

In addition to the policies of these regional organizations, domestic environmental policies play a very important role in the environmental governance of the North Sea. While not all of the surrounding states have maritime environmental laws specific to pollution caused by offshore drilling, the domestic laws of each state do provide for the penalizing of the individuals or organizations which break the laws against maritime pollution that they do have in place. This policy of punishing environmental law infringements establishes a precedent for the prosecution of those who contribute to the pollution of the sea through alternative means, including offshore drilling. Additionally, many states in the North Sea regime have adopted policies created by regional organizations into domestic law, thereby strengthening their domestic commitment to the preservation of the North Sea's integrity. As the prominent actors in the international and regional communities, the domestic commitment of states to environmental standards strengthens the regional approach to combating issues of pollution, even without the presence of a robust, overarching international institution, such as the UNEP.

Conclusion

Through the side-by-side analyses of the Mediterranean Sea and North Sea regimes above, the differences in their approaches to environmental policy and implementation become apparent. Yet, despite the different construction of each regime, each is considered to be fairly successful in regards to the abatement of pollution from offshore drilling. Both the highly institutionalized approach of the Mediterranean Sea regime and the greater focus on domestic policy in the North Sea have created precedents for regional commitment to pollution abatement that will enable the creation of further policy in the future. The benefit of this precedent is already clear in the recent growth of offshore drilling in the Mediterranean Sea. As the explosive growth in offshore drilling is relatively new, the regime has not implemented protocols of the same caliber as earlier commitments to monitoring other sources of pollution in the sea.

It is evident from each of the case studies, that the success of each regime is not tied specifically to one mechanism within that regime. The Mediterranean Sea regime is not successful solely due to the presence of the UNEP Regional Seas program, and the North Sea regime is not successful solely due to the commitment of regional states to pollution abatement regarding offshore drilling. For example, there are several regional institutions operating in the North Sea regime that contribute to policy decisions, publish reports, etc. These organizations are simply not as institutionalized as an organization such as the UNEP. However, the case of the North Sea proves that the an overarching organization such as the UNEP is not entirely necessary for the successful implementation of environmental policy when there is pre-existing regional commitment to the resolution of the environmental issue (in this case, addressing pollution from offshore drilling).